

REMARKS

The above claim amendments are submitted along with the following remarks to be fully responsive to the outstanding Office Action mailed June 2, 2004. It is further submitted that this response is timely filed within the shortened statutory period. Reconsideration of all outstanding grounds of objection and rejection and allowance of the subject application are respectfully requested.

Specification

The specification was amended to correct typographical errors relative to spelling and reference numerals in the original application that were noted in review of the application by the Applicants. No new matter was added.

Claim Rejections

Claims 11-14 are rejected under 35 USC § 102(b) as being anticipated by U.S. Patent No. 5,141,774 to Prittinen et al. Claim 11 has been amended herein to more particularly define the location of the hole or holes of the thermal conductive medium applicator tip to be at a location spaced from the second end of the applicator tip, where the applicator tip also includes a first end (which is spaced from the second end) and that is coupled to the pump. This configuration is shown in Figure 2, for example, and described in the specification on page 9 line 1 through page 10, line 5, for example. Thus, no new matter is added.

Applicants respectfully disagree with the Examiner's characterization of certain features of Prittinen et al. that form the basis of the anticipation rejection of claim 11. The Examiner refers to the rotary probe 170 of Prittinen et al. as "a coating applicator tip" that is coupled to the pump 75, where the rotary probe 170 includes at least one hole 76 through which the coating material can be expelled when pumped through the rotary probe 170 by the pump 75. However, the rotary probe 170 is not coupled to the pump 75. Rather, Prittinen et al. disclose that the tube 30, which does not rotate, is connected to the pump 75 (e.g., column 4, lines 13-14). This tube 30 is used to provide fluid to the interior portion of the rotary probe 170. Rather than being coupled to a pump, the rotary probe 170 is moved by a stepping motor 82 for vertical positioning relative to a surface 14 of a table 15 and for dispersing fluid onto a selected surface through centrifugal force. As is further described in column 4, lines 9-13 of Prittinen et al., a pair of conventional bearings 95, driven by a belt 73, provide rotation of probe 170 and housing assembly 102. However, Prittinen et al. do not disclose a coupling of probe 170 to a pump, as in the present claim 11.

With further reference to Figure 1 of Prittinen et al. (which includes a probe 70 that is configured at least slightly differently than the probe 170 of other Figures), even if the probe 70 of this Figure 1 could be characterized as a coating applicator tip, there is no suggestion that the probe 70 include any holes other than those that seem to be shown at the end of the probe 70 as reference numeral 76. These holes are not positioned to be spaced from the end of the probe 70 in the manner that the hole or holes of the present claim 11 are recited to be spaced from an end of the thermal conductive medium applicator tip. Similarly, the tube 30, which is attached to a pump, cannot be characterized as a coating applicator tip as defined in the present claim 11. Prittinen et al. disclose the only outlet for fluid from the tube 30 as located at the end of the tube 30 that is opposite the end of the tube connected to the pump, which is described as the “top end 32 of tube 30” relative to Figure 3. Prittinen et al. do not disclose any other holes or openings of the tube 30 other than that outlet at the end of the tube 30, and particularly do not disclose any hole location that is spaced from the end of the tube 30. Thus, claim 11 is allowable over Prittinen et al.

With regard to claim 12, which depends from claim 11, the Examiner refers to the probe unit 79 (which is also referred to as a “pulley section 79” in column 6, line 18) and the rotary union 90 of Prittinen et al. as a “hollow applicator shaft” for mounting the device 170, and further refers to the probe unit 79 and the rotary union 90 as coupling the device 170 to the pump in Figure 1. Applicants disagree that the probe unit 79, which appears in Figure 1 to include a number of components (including a rotary probe 70), and the rotary union 90, which also appears to encompass a number of components and structures, can be characterized as a hollow applicator shaft, as in the present claim 12. Thus, claim 12 is also allowable over Prittinen et al. as discussed specifically herein and further in that it depends from claim 11, which is also believed allowable, as discussed above.

Claim 13 has been amended to indicate that the closed tip is at the second end of the thermal conductive medium applicator tip and that the open shaft configuration is at the first end of the thermal conductive medium applicator tip. With regard to the rejection of claim 13, Applicants again disagree with the Examiner’s characterization of the rotary tube 170 of Prittinen et al. as being connected to the pump and having a closed end. As discussed above relative to claim 11, the rotary tube 170 is not coupled to a pump; therefore, any closed tip ends or open shaft ends on the tube 170 would do nothing to cure this deficiency. Thus, claim 13 is also allowable over Prittinen et al. as discussed specifically herein and further in that it depends from claim 12, which is also believed allowable. With regard to the rejection of claim 14, the inclusion of a computer 50 in Prittinen et al. does nothing to cure the deficiencies of this

reference relative to its base claim 11, in that Prittinen et al. does not disclose an applicator tip having the features recited in claim 11. Thus, claim 14, which depends from claims 11-13, is also allowable over Prittinen et al.

Claim 1 is rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,141,774 to Prittinen et al. in view of U.S. Patent No. 5,038,708 to Wells et al. Applicants point out that the limitations of claim 4 have been added to claim 1 to provide antecedent basis for "said applicator shaft" in the clause of the claim including "an open shaft end attached to said applicator shaft". No new matter is added, as claim 4 was submitted in the application as originally filed. In addition, a clarifying amendment to claim 1 was made to include a reference to a plurality of nozzles throughout the claim rather than referring to "a nozzle", then "a plurality of nozzles" in the claim.

In the rejection of claim 1, the Examiner again refers to the rotary probe 170 of Prittinen et al. as an applicator tip having features recited in claim 1, with Wells et al. showing a structure having a plurality of openings located along a line in the axial direction of a spray head. However, claim 1 of the present invention specifically recites a pump having "an output coupled to said tubular applicator tip", where the tubular applicator tip includes a closed tip end, an open shaft end attached to an applicator shaft, and a plurality of nozzles extending between the closed tip end and the open end. As discussed above relative to claim 11, the rotary probe 170 of Prittinen et al. is not coupled to a pump and there is no suggestion therein of such a coupling of components. Rather, the tube 30 of Prittinen et al. is connected to the pump 75, and there is no suggestion that the tube 30 include the structural limitations of the present claim 1, such as a plurality of nozzles positioned in a sidewall of the tube 30. Rather, tube 30 of Prittinen et al. has a single opening, which is at the end of the tube opposite the tube end that is attached to the pump 75. Thus, Prittinen et al. does not teach or suggest the apparatus of claim 1. Further, because the aligned holes in a spray head of Wells et al. do nothing to cure the deficiencies of Prittinen et al., withdrawal of the rejection of claim 1 is respectfully requested.

Claims 3, 4, 6, 7, 8, and 15 are rejected under 35 USC §103(a) as being unpatentable over the references as combined relative to the rejection of claim 1, in further view of U.S. Patent No. 3,977,358 to Stroobants. As noted in the claim amendments, claim 4 is hereby canceled, thereby rendering moot the rejection thereof. Further, the limitations of claim 4 have been added to claim 6 to provide antecedent basis for "said applicator shaft" in that claim.

With particular reference to claim 3, which depends from claim 1, the disclosure of Stroobants related to the use of a sensor means for detecting the correct positioning of an article

does nothing to cure the deficiencies of Prittinen et al., either alone or in combination with Wells et al. Thus, claim 3 is allowable as presented, at least in that it depends from claim 1, which is allowable for the reasons described above.

Independent claim 6 has some similar limitations to those of independent claim 1 including the fact that claim 6 also includes the recitation of a pump having an output that is coupled to a tubular applicator tip. This applicator tip includes a nozzle positioned in the sidewall thereof and a closed tip end to prevent expulsion of thermal conductive medium from the tip in the axial direction of the tip. Again, the only component in the disclosure of Prittinen et al. that is described as being attached to a pump is the tube 30, and this tube 30 does not include either nozzles in its sidewall or a closed tip end, as in the present claim 6. Further, Prittinen et al. do not teach or suggest coupling of the rotary probe 170 to a pump, and the disclosed sensor means of Stroobants does nothing to cure the deficiencies of Prittinen et al., either alone or in combination with Wells et al. Thus, claim 6 is allowable and withdrawal of the rejection thereof is respectfully requested. In addition, the disclosure of any timing circuits in the cited art for the purpose of providing reactive switching between coating subassemblies, as suggested by the Examiner, does nothing to cure the deficiencies of the references cited relative to claim 6 or claims 7 and 8, which depend therefrom. Thus, claims 7 and 8 are also allowable over the cited references, either alone in combination with each other.

Finally, the disclosure of a particular sensor means in Stroobants does nothing to cure the deficiencies of Prittinen et al., either alone or in combination with Wells et al. with regard to claim 15 of the present application. That is, the fact that none of the cited references teach or suggest a system including a pump coupled to one end of a thermal conductive medium applicator tip with at least one hole spaced from another end of the applicator tip, as in the present invention, is not cured by any sensor means disclosed by Stroobants. Thus, claim 15 is allowable as described herein and at least in that it depends from claim 11.

With respect to claims 5 and 10, Applicants respectfully thank the Examiner for the indication of allowable subject matter.

Accordingly, it is submitted that presently pending claims 1, 3, 5-8, and 10-15 are currently in condition for allowance, a notice of which is earnestly solicited. The Examiner is invited to contact the undersigned, at the Examiner's convenience, should the Examiner have any questions regarding this communication or the present patent application.

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